

Appl. No. : 10/762,209
Filed : January 20, 2004

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application. Applicants have amended Claims 1-22 and add Claim 23 as follows:

1. (Currently Amended) A hand-held electronic device comprising: hinge device for coupling
a first unit; rotatable about a first rotation axis and
a second unit, wherein at least one of the first and second units comprises a
display, and wherein at least one of the first and second units comprises an information
input device; rotatable about a second rotation axis parallel with the first rotation axis in
an apparatus having the first and second units, comprising:
a hinge device interconnecting the first and second units such that the first and
second units can rotate relative to the hinge device, the hinge device comprising:
 a housing;
 a first rotating member adapted to be coupled to the first unit and rotatable
 about ~~at~~ the first rotation axis with respect to the housing;
 a second rotating member adapted to be coupled to the second unit and
 rotatable about ~~at~~ the second rotation axis with respect to the housing;
 a first linearly moving member cooperating with the first rotating member
 and linearly movable with respect to the housing;
 a second linearly moving member cooperating with the second rotating
 member and linearly movable with respect to the housing;
 a first resilient member urging the first linearly moving member against
 the first rotating member; and
 a second resilient member urging the second linearly moving member
 against the second rotating member.
2. (Currently Amended) The hinge-device as claimed in claim 1, wherein the first and second rotating members are engagedly rotated.

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3. (Currently Amended) The hinge-device as claimed in claim 1, wherein the first and second rotating members comprise include mutually engaging gears so that the rotating members can rotate together with each other.

4. (Currently Amended) The hinge-device as claimed in claim 1, wherein the first and second linearly moving members are engagedly independently moved.

5. (Currently Amended) The hinge-device as claimed in claim 1, wherein the first and second linearly moving members are integrated together ~~formed integrally with each other~~.

6. (Currently Amended) The hinge-device as claimed in claim 1, wherein one of the first rotating member and the first linearly moving member comprises includes a first cam portion and the other comprises includes a first cam follower portion cooperating with the first cam portion, and one of the second rotating member and the second linearly moving member comprises includes a second cam portion and the other comprises includes a second cam follower portion cooperating with the second cam portion

7. (Currently Amended) The hinge-device as claimed in claim 6, wherein each of the first and second cam portions comprises includes an upward slanting surface and a downward slanting surface.

8. (Currently Amended) The hinge-device as claimed in claim 7, wherein the cam portion comprises includes a first insertion groove into which the cam follower portion can be inserted ~~at a distal end of the downward slant surface~~, a horizontal surface, and a second insertion groove into which the cam follower portion can be inserted, and wherein the first insertion groove is formed about an end of the downward slanting surface.

9. (Currently Amended) The hinge-device as claimed in claim 6, wherein the first and second rotating members are engagedly independently rotated.

10. (Currently Amended) The hinge-device as claimed in claim 6, wherein the first and second linearly moving members are engagedly interdependently moved.

11. (Currently Amended) The hinge-device as claimed in claim 6, wherein the first cam portion comprises a first cam surface, which comprises includes a first fixing groove into which the first cam follower portion can be inserted; wherein and the second cam portion comprises a second cam surface, which comprises includes a second fixing groove into which the second cam follower portion can be inserted; wherein when the first cam follower portion is

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inserted into the first fixing groove, the second rotating member can rotate rotates while the first rotating member is maintained in a stationary state; and wherein when the second cam follower portion is inserted into the second fixing groove, the first rotating member can rotates while the second rotating member is maintained in a stationary state.

12. (Currently Amended) The hinge-device as claimed in claim 11, wherein the first cam surface further comprises portion includes a horizontal surface contiguous to the first fixing groove, and stoppers at both ends thereof for preventing movement of the first cam follower portion from the stopper in one direction.

13. (Currently Amended) The hinge-device as claimed in claim 12, wherein the horizontal surface of the first cam surface further comprises portion is provided with at least one intermediate stopper groove in the horizontal surface, and wherein the intermediate stopper groove is relatively shallower than the first and second fixing grooves.

14. (Currently Amended) The hinge-device as claimed in claim 12, wherein the second cam surface portion further comprises includes an upward slanting surface, a horizontal surface, and a stopper at one end thereof for preventing movement of the second cam follower portion from the stopper in one direction.

15. (Currently Amended) The hinge-device as claimed in claim 12, wherein the second cam surface comprises portion includes an upward slanting surface and a downward slanting surface.

16. (Currently Amended) The hinge-device as claimed in claim 1, wherein one of the first rotating member and the first linearly moving member comprises includes a first protrusion and the other comprises includes a groove into which the first protrusion can be inserted, and one of the second rotating member and the second linearly moving member comprises includes a second protrusion and the other comprises includes a second groove into which the second protrusion can be inserted.

17. (Currently Amended) The hinge-device as claimed in claim 16, wherein the member provided with the first groove is formed with a track for guiding movement of the first protrusion therealong, and the member provided with the second groove is formed with a track for guiding movement of the second protrusion therealong.

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18. (Currently Amended) The hinge-device as claimed in claim 16, wherein the first and second rotating members are engagedly rotated.

19. (Currently Amended) The hinge-device as claimed in claim 16, wherein the first and second linearly moving members are engagedly moved.

20. (Currently Amended) The hinge-device as claimed in claim 1, wherein the first and second linearly moving members are provided with through-holes, the first and second rotating members comprise ~~have~~ extension rods extending in the first and second rotation axes, respectively, and the first and second linearly moving members and the first and second resilient members are fitted around the extension rods.

21. (Currently Amended) The hinge-device as claimed in claim 1, wherein the housing comprises ~~has~~ passages through which a circuit wire connecting between the first and second units passes.

22. (Currently Amended) The hinge-device as claimed in claim 1, wherein the first and second rotating members are connected to the first and second units at one end of the housing, and the other end of the housing is provided with holes through which a circuit wire passes.

23. (New) The device of Claim 1, wherein the hand-held electronic device comprises one of a wireless communication device and a hand-held computer.

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SUMMARY OF INTERVIEW

Applicants thank Examiner Jackson for the telephonic interview extended to Applicants' representative, Mincheol Kim (Registration No. 51,306) on April 21, 2005. The following summarizes the substance of the interview.

Exhibits and/or Demonstrations

None.

Identification of Claims Discussed

Claims 1-22.

Identification of Prior Art Discussed

U.S. Patent No. 6,009,568 to Miyazaki.

Proposed Amendments

Applicants' Representative proposed amendments to Claim 1, which redefine the claimed subject matter as "a mobile phone" or "hand-held electronic device" and recite limitations identical to amended Claim 1 as set forth above except for a correction of grammatical errors.

Principal Arguments and Other Matters

Applicants' Representative inquired about the acceptability of amending the subject matter to "mobile phone" or "hand-held electronic device." The Examiner stated that his search of the prior art covered the field of electronic devices including the proposed subject matter and the proposed amendments are acceptable.

Applicants' Representative presented that Claim 1 with the proposed amendments overcomes Miyazaki. The Examiner agreed.

Results of Interview

The Examiner and Applicants' Representative agreed that the proposed amendments to Claim 1 are acceptable and would overcome the Section 102 rejection based on Miyazaki.